

In the claims

1. (Currently Amended) A system for analyzing a computer application while it is executing without terminating or interrupting the application, comprising:

an application that is executing to be analyzed;

an administration client;

an object shell console executing on the administration client, the object shell console connected to the application so that it can extract information from the application that defines at least the basic internal structure of the application including at least one object component without interrupting the application or causing the application to terminate, wherein the at least one object component includes a set of methods of an object currently executing within the application and wherein each method of the set includes a list of variables and corresponding values available for the method and a list of arguments and corresponding values passed to or from each method; and

a graphical user interface presented by the object shell console for presenting at least a portion of the extracted information that defines the internal structure to the user and allowing the user to obtain additional detailed information regarding the internal structure including values associated with the at least one object component, wherein the graphical user interface displays the set of methods, receives a selection of one of the methods, displays the list of variables available for the selected method, and displays the list of arguments being passed to or from the selected method, wherein the graphical user interface receives user input specifying an argument value for one of the displayed arguments, and wherein the object shell console passes the argument value for the displayed argument to the selected method within the application, causes the application to re-execute the method with the argument value, and extracts an updated list of variable values and argument values upon the method re-executing to display the updated list of variable values and argument values.

2. – 3. (Cancelled)

4. (Original) The system recited in claim 1, wherein the object shell console determines a number of times a selected method is invoked.
5. (Original) The system recited in claim 1, wherein the object shell console determines a length of time required for a selected method to execute.
6. (Cancelled)
7. (Currently Amended) The system recited in claim 6 1, wherein the thread is created using JAVA programming language RMI.
8. (Currently Amended) A method for analyzing a computer application while it is executing, comprising the steps of:  
connecting an object shell console to an executing computer application;  
extracting information defining the internal structure of the application and including at least one object component from the computer application without interrupting or terminating the computer application, wherein the at least one object component includes a set of methods of an object currently executing within the application and wherein each method of the set includes a list of variables and corresponding values available for the method and a list of arguments and corresponding values passed to or from each method; and  
displaying the information to a user in a graphical user interface component, wherein the graphical user interface displays the set of methods, receives a selection of one of the methods, displays the list of variables available for the selected method, and displays the list of arguments being passed to or from the selected method, wherein the graphical user interface receives user input specifying an argument value for one of the displayed arguments, and wherein the object shell console passes the argument value for the displayed argument to the selected method within the application, causes the application to re-execute the method with the argument value, and extracts an updated list of variable values and argument values upon the method re-executing to display the updated list of variable values and argument values.

9. (Cancelled)

10. (Currently Amended) The method recited in claim 8, wherein the extracting step comprises the step of extracting one or more of a ~~variable name, a variable value, an argument name, an argument value,~~ number of times a selected method is invoked, an execution time of a selected method and a class.

11. (Currently Amended) The method recited in claim 8, further comprising the step of displaying the information ~~in~~ according to a hierarchy.

12. (Original) The method recited in claim 11, further comprising the steps of:  
displaying at least one class in the graphical user interface; and  
displaying at least one method corresponding to at least one of the at least one classes.

13. (Previously Presented) The method recited in claim 8, further comprising the steps of:

accepting a request from the user for more detailed information about the at least one object component including a value associated with the object component;

obtaining the more detailed information including the value associated with the object component in response to the user's request; and

displaying the more detailed information including the value associated with the object component to the user in the graphical user interface.

14. (Currently Amended) A system for analyzing a computer application while it is executing, comprising:

a computer application executing on an application server;

a thread for connecting an object shell console to the computer application;

means for extracting information that defines the internal structure of the computer application including at least one object component without interrupting or terminating the computer application, wherein the at least one object component includes a set of methods of an object currently executing within the application and wherein each method of the set includes a list of variables and corresponding values available for the method and a list of arguments and corresponding values passed to or from each method;

means for displaying the extracted information including the at least one object component to a user in a graphical user interface;

means for accepting a request from the user for additional detailed information including a value associated with the object component, wherein the graphical user interface displays the set of methods and wherein the request is a selection of one of the methods; and

means for providing the additional detailed information including the value associated with the object component to the user in the graphical user interface, wherein the means for providing displays the list of variables available for the selected method, and displays the list of arguments being passed to or from the selected method

means for receiving user input specifying an argument value for one of the displayed arguments;

means for passing the argument value for the displayed argument to the selected method within the application to cause the application to re-execute the method with the argument value;

means for extracting an updated list of variable values and argument values upon the method re-executing so that the means for providing displays the updated list of variable values and argument values.

15. (Original) The system recited in claim 14, further comprising means for determining an execution time of a selected method.

16. (Original) The system recited in claim 14, further comprising means for determining a number of times a selected method is executed.

17-18. (Cancelled)

19. (Original) The system recited in claim 18, further comprising means for presenting the information in a hierarchical fashion.

20. (Currently Amended) A system for analyzing a computer application in real-time, comprising:

an application server on which one or more computer applications is executing, one of the one or more computer applications being a computer application to be analyzed;

an administration client;

an object shell console executing on the administration client that can attach to the application to be analyzed to extract information that defines the internal structure of the application and includes at least one object component from the application to be analyzed; and

a graphical user interface in which the information from the application to be analyzed defines the internal structure including the object component is displayed to a user.

21. (Original) The system recited in claim 20, wherein the application to be analyzed is written in a computer language that is an interpreter.

22. (Original) The system recited in claim 20, further comprising a thread through which the object shell is attached to the application to be analyzed.

23. (Currently Amended) The system recited in claim 22, wherein the thread is created using JAVA programming language RMI.

24. (Cancelled)